

## Up and Down Raisins

With just a tall glass, clear soda, and raisins, you can show your friends something that will amaze them. Any soda will work for this activity. But clear soda works best. Try Sprite®, 7-Up®, club soda, or ginger ale.

### You Will Need

a box of fresh raisins, clear soda, tall clear glass

### What to Do

1. Tear 3-4 raisins in half. Make sure that the raisins have not been in an open box and dried out.
2. Pour clear soda into a tall glass.
3. Drop the raisin halves into the glass of soda.



### Observing the Raisins

When you drop the fresh raisins in the soda, they fall to the bottom of the glass. Observe the bubbles sticking to the raisins. Watch the raisins rise. When the raisins reach the surface, some of the bubbles burst and the raisins fall to the bottom again.

### Why This Happens

When you drop the raisins into the glass, bubbles stick to the rough surface of the raisins. The bubbles contain carbon dioxide gas ( $\text{CO}_2$ ) from the soda. The raisins with their bubbles rise because the buoyancy increases. In this activity, buoyancy is the upward force on the raisins in the soda. At the surface, some bubbles burst and the  $\text{CO}_2$  goes into the air. The raisins now lose their buoyancy and sink again. The movement of the raisins will continue as long as enough  $\text{CO}_2$  remains in the soda.

### Try This

Instead of raisins, try corn seeds, elbow pasta, lentils, or craisins. Which works best? Can you combine some of these? Will they still rise and fall in the liquid? Will other liquids work? Try ginger ale or tonic water.